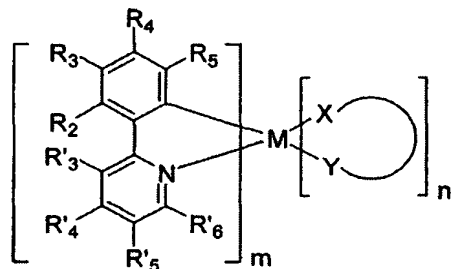


## AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in this application.

### Listing of Claims:

1. (currently amended) An emissive material represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

R<sub>3</sub> is a substituent having a Hammett value greater than about 0.6;

each of R<sub>2</sub>, ~~R<sub>4</sub>~~, ~~through~~ R<sub>5</sub>, and R'<sub>3</sub> through R'<sub>6</sub> are independently selected from the group consisting of H, halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, PO<sub>3</sub>R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR<sub>2</sub> (including cyclic-amino), and PR<sub>2</sub> (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

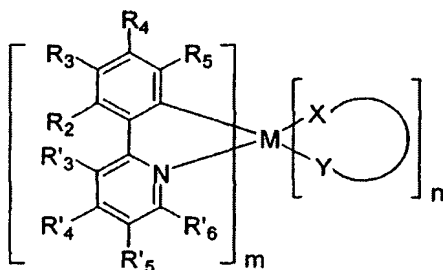
m is an integer between 1 and 4 and n is an integer between 1 and 3; and,



is a monoanionic non carbon coordinating ligand.

2. (previously presented) The emissive material of claim 1 wherein R<sub>4</sub> is H.
3. (canceled)
4. (previously presented) The emissive material of claim 1 wherein R<sub>5</sub> is an electron withdrawing group.
5. (canceled)

6. (previously presented) The emissive material of claim 1 wherein at least one of R<sub>2</sub> and R<sub>4</sub> is an electron withdrawing group.
7. (previously presented) The emissive material of claim 4 wherein at least one of R<sub>2</sub> and R<sub>4</sub> is an electron withdrawing group.
8. (currently amended) The emissive material of claim 1 wherein at least one substituent of the ~~emissive~~ emissive material is an electron withdrawing group selected from halogens, CN, ~~perfluoralkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, PO<sub>3</sub>R, C≡CR, and aryl and heteroaryl groups substituted with halogens, CN, ~~perfluoralkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, or PO<sub>3</sub>R, where R is a hydrogen, alkyl, aryl or heteroaryl group.
9. (previously presented) The emissive material of claim 1 wherein R<sub>5</sub> is an electron donating group.
10. (canceled)
11. (canceled)
12. (currently amended) The emissive material of claim 1 wherein at least one substituent of the ~~emissive~~ emissive material is an electron donating group selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR<sub>2</sub> (including cyclic-amino), and PR<sub>2</sub> (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.
13. (previously presented) The emissive material of claim 1 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.
14. (previously presented) The emissive material of claim 1 wherein the metal is iridium.
15. (previously presented) The emissive material of claim 1 wherein the metal is platinum.
16. (previously presented) A composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

at least one of  $R_3$  and  $R_5$  is CN;

each of  $R_2$  through  $R_5$  and  $R'_3$  through  $R'_6$  are independently selected from the group consisting of H, halogens, CN, ~~perfluoralkyl~~ perfluoroalkyl, trifluorovinyl,  $\text{NO}_2$ ,  $\text{CO}_2\text{R}$ ,  $\text{C}(\text{O})\text{R}$ ,  $\text{S}(\text{O})\text{R}$ ,  $\text{SO}_2\text{R}$ ,  $\text{SO}_3\text{R}$ ,  $\text{P}(\text{O})\text{R}$ ,  $\text{PO}_2\text{R}$ ,  $\text{PO}_3\text{R}$ ,  $\text{C}\equiv\text{CR}$ , alkyl, alkenyl, aryl, heteroaryl, OR, SR,  $\text{NR}_2$  (including cyclic-amino), and  $\text{PR}_2$  (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group, wherein at least one of  $R_3$  and  $R_5$  is CN;

m is an integer between 1 and 4 and n is an integer between 1 and 3;



is a monoanionic non carbon coordinating ligand; and,

wherein if neither  $R_3$  nor  $R_5$  is an electron donating group then  $R'_4$  is an electron donating group.

17. (original) The composition of claim 16, wherein neither  $R_3$  nor  $R_5$  is an electron donating group and wherein  $R'_4$  is an electron donating group.

18. (canceled)

19. (previously presented) The composition of claim 16, wherein  $R'_4$  is an electron donating group.

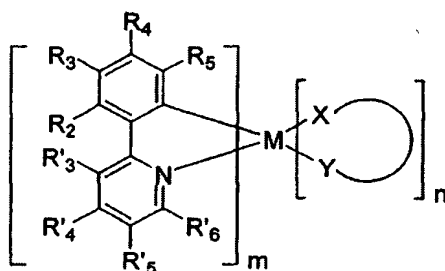
20. (previously presented) The composition of claim 16, wherein one of  $R_3$  and  $R_5$  is an electron donating group, and  $R'_4$  is an electron withdrawing group.

21. (currently amended) The composition of claim 16 wherein at least one substituent of the composition is an electron withdrawing group selected from halogens, CN, ~~perfluoralkyl~~ perfluoroalkyl, trifluorovinyl,  $\text{NO}_2$ ,  $\text{CO}_2\text{R}$ ,  $\text{C}(\text{O})\text{R}$ ,  $\text{S}(\text{O})\text{R}$ ,  $\text{SO}_2\text{R}$ ,  $\text{SO}_3\text{R}$ ,  $\text{P}(\text{O})\text{R}$ ,  $\text{PO}_2\text{R}$ ,  $\text{PO}_3\text{R}$ , or  $\text{C}\equiv\text{CR}$ , and aryl and heteroaryl groups substituted with halogens, CN, ~~perfluoralkyl~~ perfluoroalkyl, trifluorovinyl,  $\text{NO}_2$ ,  $\text{CO}_2\text{R}$ ,  $\text{C}(\text{O})\text{R}$ ,  $\text{S}(\text{O})\text{R}$ ,  $\text{SO}_2\text{R}$ ,  $\text{SO}_3\text{R}$ ,  $\text{P}(\text{O})\text{R}$ ,  $\text{PO}_2\text{R}$ , or  $\text{PO}_3\text{R}$ , where R is a hydrogen, alkyl, aryl or heteroaryl group.

22. (previously presented) The composition of claim 16 wherein at least one substituent of the composition is an electron donating group selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR<sub>2</sub> (including cyclic-amino), and PR<sub>2</sub> (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

23. (original) The composition of claim 16 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

24. (currently amended) A composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

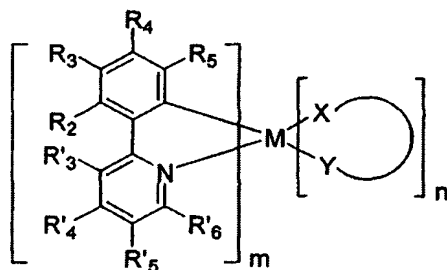
each of R<sub>2</sub>, ~~R<sub>4</sub>~~, ~~through R<sub>5</sub>~~ and R'<sub>3</sub> through ~~R<sub>6</sub>~~ R'<sub>6</sub> are independently selected from the group consisting of H, halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, PO<sub>3</sub>R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR<sub>2</sub> (including cyclic-amino), and PR<sub>2</sub> (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

at least one of R<sub>3</sub> and R<sub>5</sub> is CN, and, where only one of R<sub>3</sub> and R<sub>5</sub> is CN, the other is selected from the group consisting of H, C<sub>n</sub>F<sub>2n+1</sub> perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, PO<sub>3</sub>R, C≡CR, and aryl and heteroaryl groups substituted with halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, or PO<sub>3</sub>R, ~~or~~ C≡CR, where R is a hydrogen, alkyl, aryl or heteroaryl group, wherein m is an integer between 1 and 4 and n is an integer between 1 and 3 and X-Y is non carbon coordinating monoanionic ligand .

25. (canceled)

26. (currently amended) The composition of claim 25 24 wherein at least one of R<sub>2</sub> and R<sub>4</sub> is F.

27. (original) The composition of claim 26 wherein R<sub>4</sub> is an electron donating group.
28. (original) The composition of claim 26 wherein R<sub>4</sub> is NMe<sub>2</sub>.
29. (previously presented) The composition of claim 24 wherein one of R<sub>3</sub> and R<sub>5</sub> is CF<sub>3</sub>.
30. (original) The composition of claim 29 wherein at least one of R<sub>2</sub> and R<sub>4</sub> is F.
31. (original) The composition of claim 29 wherein R<sub>4</sub> is an electron donating group.
32. (original) The composition of claim 29 wherein R<sub>4</sub> is NMe<sub>2</sub>.
33. (currently amended) A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

~~at least one of R<sub>3</sub> and R<sub>5</sub> is CN;~~

each of R<sub>2</sub> through R<sub>5</sub> and R'<sub>3</sub> through R'<sub>6</sub> are independently selected from the group consisting of H, halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, PO<sub>3</sub>R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR<sub>2</sub> (including cyclic-amino), and PR<sub>2</sub> (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group, wherein at least one of R<sub>3</sub> and R<sub>5</sub> is CN;

one of R<sub>3</sub> and R<sub>5</sub> is optionally an electron donating group;

m is an integer between 1 and 4 and n is an integer between 1 and 3; and

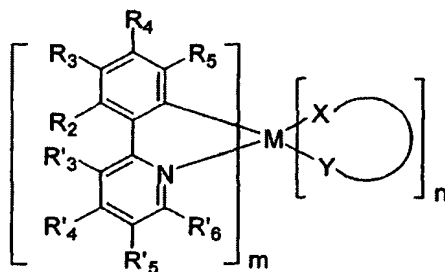


is a monoanionic non carbon coordinating ligand.

34. (canceled)

35. (original) The light emitting device of claim 33 wherein  $R_3$  and  $R_5$  are both electron withdrawing groups.
36. (original) The light emitting device of claim 33 wherein  $R_3$  is an electron withdrawing group.
37. (currently amended) The light emitting device of claim ~~33~~ 36 wherein  $R_2$  and  $R_4$  are electron withdrawing groups.
38. (original) The light emitting device of claim 33 wherein  $R_2$  and  $R_4$  are electron withdrawing groups.
39. (previously presented) The light emitting device of claim 33 wherein one of  $R_3$  and  $R_5$  is an electron donating group.
40. (canceled)
41. (currently amended) The light emitting device of claim 33 wherein at least one substituent of the ~~emissive~~ emissive material is an electron donating group selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR,  $NR_2$  (including cyclic-amino), and  $PR_2$  (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.
42. (original) The light emitting device of claim 33 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.
43. (original) The light emitting device of claim 33 wherein the metal is Pt.
44. (original) The light emitting device of claim 33 wherein the metal is Ir.
45. (currently amended) The light emitting device of claim 33 wherein light emitted by the organic layer has a maximum wavelength of less than 520 nm.
46. (original) The light emitting device of claim 33 wherein light emitted by the organic layer has a wavelength of between approximately 420 nm and approximately 480 nm.

47. (currently amended) A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

~~at least one of R<sub>3</sub> and R<sub>5</sub> is CN;~~

each of R<sub>2</sub> through R<sub>5</sub> and R'<sub>3</sub> through R'<sub>6</sub> are independently selected from the group consisting of H, halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, PO<sub>3</sub>R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR<sub>2</sub> (including cyclic-amino), and PR<sub>2</sub> (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group, wherein at least one of R<sub>3</sub> and R<sub>5</sub> is CN;

~~at~~ one of R<sub>3</sub> and R<sub>5</sub> is optionally an electron donating group;

m is an integer between 1 and 4 and n is an integer between 1 and 3;



is a monoanionic non carbon coordinated ligand; and,

wherein if neither R<sub>3</sub> nor R<sub>5</sub> is an electron donating group then R'<sub>4</sub> is an electron donating group.

48. (previously presented) The light emitting device of claim 47, wherein R'<sub>4</sub> is an electron donating group.

49. (previously presented) The light emitting device of claim 47, wherein both R<sub>3</sub> and R<sub>5</sub> are electron withdrawing groups and R'<sub>4</sub> is an electron donating group.

50. (previously presented) The light emitting device of claim 47, wherein one of R<sub>3</sub> and R<sub>5</sub> is an electron donating group and R'<sub>4</sub> is an electron withdrawing group.

51. (previously presented) The light emitting device of claim 47, wherein R'<sub>4</sub> is an electron withdrawing group.

52. (currently amended) The light emitting device of claim 47 wherein at least one substituent of the composition is an electron withdrawing group selected from halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, PO<sub>3</sub>R, C≡CR, and aryl and heteroaryl groups substituted with halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, or PO<sub>3</sub>R, where R is a hydrogen, alkyl, aryl or heteroaryl group.

53. (previously presented) The light emitting device of claim 47 wherein at least one substituent of the composition is an electron donating group selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR<sub>2</sub> (including cyclic-amino), and PR<sub>2</sub> (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

54. (original) The light emitting device of claim 47 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

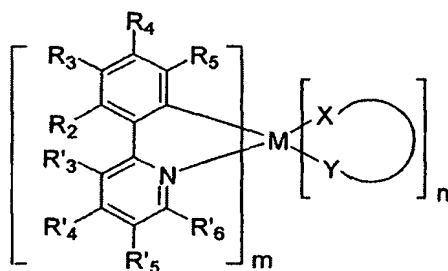
55. (original) The light emitting device of claim 47 wherein the metal is Pt.

56. (original) The light emitting device of claim 47 wherein the metal is Ir.

57. (original) The light emitting device of claim 47, wherein light emitted by the organic layer has a maximum wavelength of less than 520nm.

58. (original) The light emitting device of claim 47 wherein light emitted by the organic layer has a wavelength of between approximately 420 nm and approximately 480 nm.

59. (currently amended) A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to

40;



each of  $R_2$ ,  $R_4$ , ~~through  $R_5$~~  and  $R'_3$  through  $R'_6$  are independently selected from the group consisting of H, halogens, CN, ~~perfluoralkyl~~ perfluoroalkyl, trifluorovinyl,  $\text{NO}_2$ ,  $\text{CO}_2\text{R}$ ,  $\text{C}(\text{O})\text{R}$ ,  $\text{S}(\text{O})\text{R}$ ,  $\text{SO}_2\text{R}$ ,  $\text{SO}_3\text{R}$ ,  $\text{P}(\text{O})\text{R}$ ,  $\text{PO}_2\text{R}$ ,  $\text{PO}_3\text{R}$ ,  $\text{C}\equiv\text{CR}$ , alkyl, alkenyl, aryl, heteroaryl, OR, SR,  $\text{NR}_2$  (including cyclic-amino), and  $\text{PR}_2$  (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

m is an integer between 1 and 4 and n is an integer between 1 and 3; and,



is a monoanionic non carbon coordinating ligand;

at least one of  $R_3$  and  $R_5$  is CN, and where only one of  $R_3$  and  $R_5$  is CN, the other is selected from the group consisting of H,  $\text{C}_n\text{F}_{2n+1}$  perfluoroalkyl, trifluorovinyl,  $\text{NO}_2$ ,  $\text{CO}_2\text{R}$ ,  $\text{C}(\text{O})\text{R}$ ,  $\text{S}(\text{O})\text{R}$ ,  $\text{SO}_2\text{R}$ ,  $\text{SO}_3\text{R}$ ,  $\text{P}(\text{O})\text{R}$ ,  $\text{PO}_2\text{R}$ ,  $\text{PO}_3\text{R}$ ,  $\text{C}\equiv\text{CR}$ , and aryl and heteroaryl groups substituted with halogens, CN, ~~perfluoralkyl~~ perfluoroalkyl, trifluorovinyl,  $\text{NO}_2$ ,  $\text{CO}_2\text{R}$ ,  $\text{C}(\text{O})\text{R}$ ,  $\text{S}(\text{O})\text{R}$ ,  $\text{SO}_2\text{R}$ ,  $\text{SO}_3\text{R}$ ,  $\text{P}(\text{O})\text{R}$ ,  $\text{PO}_2\text{R}$ , or  $\text{PO}_3\text{R}$ , where R is a hydrogen, alkyl, aryl or heteroaryl group.

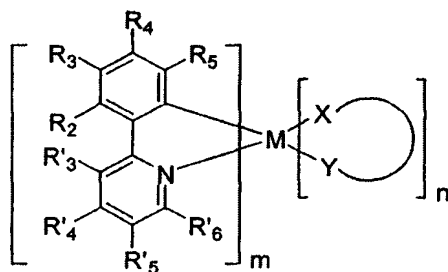
60. (canceled)

61. (currently amended) The light emitting device of claim 60 59 wherein at least one of  $R_2$  and  $R_4$  is F.

62. (currently amended) The light emitting device of claim 60 59 wherein one of  $R_3$  and  $R_5$  is  $\text{CF}_3$ .

63. (currently amended) The light emitting device of claim 60 59 wherein one of  $R_3$  and  $R_5$  is  $\text{CF}_3$ , and at least one of  $R_2$  and  $R_4$  is F.

64. (currently amended) A composition represented by the following structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

at least one of  $R_3$  and  $R_5$  is CN;

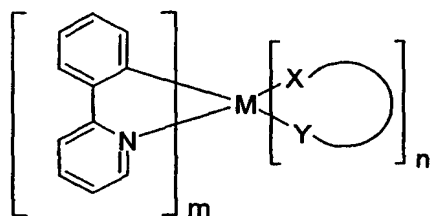
each of  $R_2$  through  $R_4$ ,  $R_5$  and  $R'_3$  through  $R'_6$  are independently selected from the group consisting of H, halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl,  $\text{NO}_2$ ,  $\text{CO}_2\text{R}$ ,  $\text{C}(\text{O})\text{R}$ ,  $\text{S}(\text{O})\text{R}$ ,  $\text{SO}_2\text{R}$ ,  $\text{SO}_3\text{R}$ ,  $\text{P}(\text{O})\text{R}$ ,  $\text{PO}_2\text{R}$ ,  $\text{PO}_3\text{R}$ ,  $\text{C}\equiv\text{CR}$ , alkyl, alkenyl, aryl, heteroaryl, OR, SR,  $\text{NR}_2$  (including cyclic-amino), and  $\text{PR}_2$  (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group, wherein at least one of  $R_3$  and  $R_5$  is CN;

m is an integer between 1 and 4 and n is an integer between 1 and 3; and,



is a monoanionic non carbon coordinating ligand,

wherein  $R_3$  and  $R_5$  are selected to provide a hypsochromic shift in the emission spectrum of the compound of greater than or equal to approximately 40 nm as compared with the emission spectrum of a composition with the following structure:

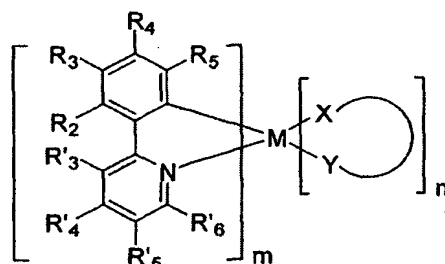


65. (canceled)

66. (canceled)

67. (canceled)

68. (currently amended) An emissive material represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40; m is at least 1 n is at least 0

X —Y is an ancillary ligand;

R<sub>2</sub> and R<sub>4</sub> are both F;

at least one of R<sub>3</sub> and R<sub>5</sub> is CN;

each of R<sub>3</sub>, R<sub>5</sub>, and R'3 through R'6 are independently selected from the group consisting of H, halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, PO<sub>3</sub>R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR<sub>2</sub> (including cyclic-amino), and PR<sub>2</sub> (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group, wherein at least one of R<sub>3</sub> and R<sub>5</sub> is CN.

69. (canceled)

70. (original) The emissive material of claim 68 wherein R<sub>3</sub> and R<sub>5</sub> are both electron withdrawing groups.

71. (original) The emissive material of claim 68 wherein R<sub>3</sub> is an electron withdrawing group.

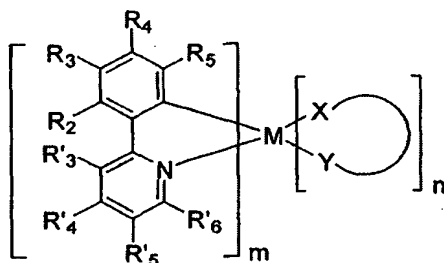
72. (currently amended) The emissive material of claim 68 wherein at least one substituent of the ~~emissive~~ emissive material is an electron withdrawing group selected from halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, PO<sub>3</sub>R, C≡CR, and aryl and heteroaryl groups substituted with halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, or PO<sub>3</sub>R, where R is a hydrogen, alkyl, aryl or heteroaryl group.

73. (previously presented) The emissive material of claim 68 wherein one of  $R_3$  and  $R_5$  is an electron donating group.
74. (canceled)
75. (original) The emissive material of claim 68 wherein  $R_3$  is an electron donating group.
76. (currently amended) The emissive material of claim 68 wherein at least one substituent of the ~~emissive~~ emissive material is an electron donating group selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR,  $NR_2$  (including cyclic-amino), and  $PR_2$  (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.
77. (original) The emissive material of claim 68 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.
78. (original) The emissive material of claim 68 wherein the metal is iridium.
79. (original) The emissive material of claim 68 wherein the metal is platinum.
80. (previously presented) The composition of claim 68 wherein if neither  $R_3$  nor  $R_5$  is an electron donating group then  $R'_4$  is an electron donating group.
81. (canceled)
82. (previously presented) The emissive material of claim 80 wherein  $R'_4$  is an electron withdrawing group.
83. (canceled)
84. (previously presented) The emissive material of claim 80 wherein one of  $R_3$  and  $R_5$  is an electron donating group, and  $R'_4$  is an electron withdrawing group.
85. (currently amended) The emissive material of claim 80 wherein at least one substituent of the ~~emissive~~ emissive material is an electron withdrawing group selected from halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl,  $NO_2$ ,  $CO_2R$ ,  $C(O)R$ ,  $S(O)R$ ,  $SO_2R$ ,  $SO_3R$ ,  $P(O)R$ ,  $PO_2R$ ,  $PO_3R$ ,  $C\equiv CR$ , and aryl and heteroaryl groups substituted with halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl,  $NO_2$ ,  $CO_2R$ ,  $C(O)R$ ,  $S(O)R$ ,  $SO_2R$ ,  $SO_3R$ ,  $P(O)R$ ,  $PO_2R$ , or  $PO_3R$ , where R is a hydrogen, alkyl, aryl or heteroaryl group.

86. (currently amended) The emissive material of claim 80 wherein at least one substituent of the ~~emissive~~ emissive material is an electron donating group selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR<sub>2</sub> (including cyclic-amino), and PR<sub>2</sub> (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

87. (original) The emissive material of claim 80 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

88. (currently amended) A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the general structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40; m is at least 1 n is at least 0

X - Y is an ancillary ligand;

R<sub>2</sub> and R<sub>4</sub> are both F;

~~at least one of R<sub>3</sub> and R<sub>5</sub> is CN;~~

each of R<sub>3</sub>, R<sub>5</sub>, and R'<sub>3</sub> through R'<sub>6</sub> are independently selected from the group consisting of H, halogens, CN, ~~perfluoroalkyl~~ perfluoroalkyl, trifluorovinyl, NO<sub>2</sub>, CO<sub>2</sub>R, C(O)R, S(O)R, SO<sub>2</sub>R, SO<sub>3</sub>R, P(O)R, PO<sub>2</sub>R, PO<sub>3</sub>R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR<sub>2</sub> (including cyclic-amino), and PR<sub>2</sub> (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group, wherein at least one of R<sub>3</sub> and R<sub>5</sub> is CN.

89. (canceled)

90. (currently amended) The light emitting device of claim 88 wherein ~~R'<sub>4</sub> is an electron withdrawing group or an electron donating group such that if neither R<sub>3</sub> nor R<sub>5</sub> is an electron withdrawing group then R'<sub>4</sub> is an electron withdrawing group and if neither R<sub>3</sub> nor R<sub>5</sub> is an electron donating group then R'<sub>4</sub> is an electron donating group.~~